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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/579,733	12/28/1995	HIROSHI NOBUTA	862.1351	4611

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EXAMINER
THOMPSON, JAMES A

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	08/579,733	NOBUTA ET AL.
	Examiner	**Art Unit**	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
 Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2007 and 22 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24,27,58,59,64,66,67,71-73 and 75* is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24,27,58,59,64,66,67,71-73 and 75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

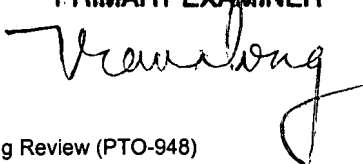8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☒ All b)☐ Some * c)☐ None of:

 1.☒ Certified copies of the priority documents have been received.

 2.☐ Certified copies of the priority documents have been received in Application No. _____.

 3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

DOUGLAS Q. TRAN
PRIMARY EXAMINER

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR

1.17(e), was filed in this application after final rejection. Since this application is eligible for continued

examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the

finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's

submission filed on 02 April 2007 has been entered.

Response to Arguments

2.   Applicant's arguments filed 02 April 2007 have been fully considered but they are not persuasive.

Applicant's arguments are directed to the present amendments to the claims. Thus, the prior art rejections

set forth below fully respond to the present amendments to the claims and the present arguments.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the art to which said subject
> matter pertains. Patentability shall not be negatived by the manner in which the invention was
> made.

4.   **Claims 24, 27 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kita**

(US Patent 5,021,892) in view of Kawamata (US Patent 4,989,163) and Matsumoto (US Patent

5,684,607).

    Regarding claim 24: Kita discloses a printing apparatus (figure 3(1) of Kita) comprising:

- a scanner (figure 3(60) of Kita) for reading an image of a document (column 5, lines 16-30 of

    Kita) and outputting an image signal (column 5, lines 31-47 of Kita).

- a control unit (figure 3(50,51,52,54,56,DB,AB,CB) of Kita – main CPU) adapted for controlling

    said printing apparatus (column 4, lines 46-54 of Kita) and performing image processing on the

    image signal output from said scanner to provide a first processed image signal, the image

    processing being processing that is necessary for copying (column 5, lines 33-42 of Kita).

- a first bidirectional general-purpose interface (figure 3(5) and column 6, lines 20-28 of Kita) adapted for transmitting, under control of said control unit, the image signal output by said scanner to an external computer (figure 3(8) and column 5, lines 65-67 of Kita), which performs image processing on the transmitted image signal to provide a second processed image signal (column 3, lines 46-48 of Kita), and for receiving the second processed image signal from the external computer (column 5, lines 65-68 of Kita – signal must be received from computer to be recorded by printer), the image processing performed by the external computer being processing that is necessary for copying (column 5, lines 65-68 of Kita – would be unable to print if processing necessary for copying was not performed).

- a second bidirectional general-purpose interface (figure 3(66) of Kita) adapted for outputting the first processed image signal (column 4, lines 3-17 of Kita) and the second processed image signal (column 5, lines 67-68 of Kita) to a printing unit (as can clearly be seen in figure 3 of Kita, element 66 is the interface leading to the printing unit).

- said printing apparatus has a plurality of modes including a read mode (column 6, line 68 to column 7, line 4 of Kita), a print mode (column 7, lines 5-7 of Kita), a first copying mode (column 6, lines 50-55 of Kita), and a second copying mode (column 6, lines 56-67 of Kita).

- in the read mode for performing a read operation in accordance with reception of a read command outputted from the external computer in response to a read key operation of the external computer conducted by a user (figure 2; column 4, lines 18-44 and lines 63-66; and column 10, line 66 to column 11, line 5 of Kita), the image signal from said scanner is transmitted to the external computer via said first bidirectional general-purpose interface (column 6, line 68 to column 7, line 5 of Kita).

- in the print mode for performing a print operation in accordance with a print command outputted from the external computer in response to a print key operation of the external computer conducted by the user (figure 2; column 4, lines 18-44 and lines 63-66; and column 11, lines 20-22 and lines 36-40 of Kita), the image signal from the external computer is transmitted to the printing unit via said first bidirectional general-purpose interface and said second bidirectional general-purpose interface (column 11, lines 36-40 of Kita).

- in the first copying mode for performing first copying operation based on the second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a copy key operation of the external computer conducted by the user (figure 2; column 4, lines 18-44 and lines 63-66; column 6, lines 50-55; and column 19, lines

63-67 of Kita), the image signal from said scanner is transmitted to the external computer where the image signal is processed into the second processed image signal via said control unit and said first bidirectional general-purpose interface in accordance with reception of the read command (column 19, line 68 to column 20, line 11 of Kita), and thereafter the second processed image signal is transmitted to the printing unit via said first bidirectional general-purpose interface, said control unit, and said second bidirectional general-purpose interface in accordance with reception of the print command (column 20, lines 12-22 of Kita).

- in the second copying mode for performing second copying operation based on the first processed image signal (column 6, lines 56-67 of Kita), the image signal from said scanner is transmitted to said control unit where the image signal is processed into the first processed image signal (column 6, lines 58-61 of Kita) and the first processed image signal is transmitted to the printing unit via said second bidirectional general-purpose interface (figure 3 and column 6, lines 56-67 of Kita).

Kita does not disclose expressly that said first and second bidirectional general-purpose interfaces are of the same standard; and that said first copying operation is completed without requiring any additional key operation of the external computer conducted by the user other than the copy key operation.

Kawamata discloses a print system wherein all of the interfaces are standardized (column 1, line 67 to column 2, line 4 of Kawamata).

Kita and Kawamata are combinable because they are from the same field of endeavor, namely digital image data printing and reproduction systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified Kita wherein the first and second bidirectional general-purpose interfaces are of the same standard, according to the teachings of Kawamata. The suggestion for doing so would have been that the overall processing speed would increase using standard interfaces since each device would operate at the fastest speed available and the input and output would be better synchronized. Therefore, it would have been obvious to combine Kawamata with Kita.

Kita in view of Kawamata does not disclose expressly that said first copying operation is completed without requiring any additional key operation of the external computer conducted by the user other than the copy key operation.

Matsumoto discloses printing, scanning, and other forms of image processing using a single

command and without requiring any additional designation of a computer conducted by the user other

than the particular image processing designation (figure 3 and column 3, lines 49-59 of Matsumoto).

Kita in view of Kawamata is combinable with Matsumoto because they are from the same field of

endeavor, namely the scanning, control and processing of digital image data in a digital image data

processing, transmitting and copying environment. At the time of the invention, it would have been

obvious to a person of ordinary skill in the art to require only a single command to perform an image

processing operation, as taught by Matsumoto, wherein said image processing operation is specifically the

first copying operation taught by Kita. The motivation for doing so would have been to simplify the

overall image data processing. Therefore, it would have been obvious to combine Matsumoto with Kita

in view of Kawamata to obtain the invention as specified in claim 24.

Regarding claim 27: Kita discloses a method comprising the steps of:

- in the read mode for performing a read operation in accordance with reception of a read command
  outputted from the external computer (column 6, line 68 to column 7, line 4 of Kita) in response
  to a read key operation of the external computer connected to the printing apparatus (figure 2;
  column 4, lines 18-44 and lines 63-66; and column 10, line 66 to column 11, line 5 of Kita) with a
  first bidirectional general-purpose interface (column 11, lines 36-40 of Kita), the read key being
  conducted by a user (column 4, lines 45-66 of Kita), reading an image of a document (column 5,
  lines 16-30 of Kita) and outputting an image signal by means of a scanner (figure 3(60) and
  column 5, lines 31-47 of Kita), and transmitting the image signal output by the scanner to the
  external computer (figure 3(8) and column 5, lines 65-67 of Kita) via the first bidirectional
  general-purpose interface (figure 3(5) and column 6, lines 20-28 of Kita).
- in the print mode for performing a print operation in accordance with reception of a print
  command outputted from the external computer (figure 2; column 4, lines 18-44 and lines 63-66;
  and column 7, lines 5-7 of Kita) in response to a print key operation of the external computer
  conducted by the user (column 11, lines 20-22 and lines 36-40 of Kita), receiving an image signal
  transmitted from the external computer via the first bidirectional general-purpose interface
  (column 11, lines 36-40 of Kita) and outputting the image signal to a printing unit (column 5,
  lines 67-68 of Kita) via a second bidirectional general-purpose interface (figure 3(66) of Kita) (as
  can clearly be seen in figure 3 of Kita, element 66 is the interface leading to the printer).
- in the first copying mode for performing first copying operation based on a second processed
  image signal in accordance with a read command and a print command transmitted from the

external computer in response to a copy key operation of the external computer conducted by the user (figure 2; column 4, lines 18-44 and lines 63-66; column 6, lines 50-55; and column 19, lines 63-67 of Kita):

- o reading an image of a document (column 5, lines 16-30 of Kita) and outputting an image signal by means of the scanner (column 5, lines 31-47 of Kita).

- o transmitting the image signal output by the scanner to the external computer via the first bidirectional general-purpose interface (column 5, lines 65-67 of Kita), wherein the external computer performs image processing on the transmitted image signal to provide the second processed image signal (column 3, lines 46-48 of Kita), the image processing being processing that is necessary for copying (column 5, lines 65-68 of Kita – would be unable to print if processing necessary for copying was not performed), wherein said reading and said transmitting are performed in accordance with reception of the read command (column 4, lines 18-30 of Kita).

- o receiving the second processed image signal from the external computer (column 5, lines 65-68 of Kita – signal must be received from computer to be recorded by printer) via the first bidirectional general-purpose interface (figure 3(5) of Kita – as can clearly be seen in figure 3 of Kita, element 5 is the interface for receiving data from the external computer).

- o outputting the second processed image signal to the printing unit (column 5, lines 67-68 of Kita) via the second bidirectional general-purpose interface (as can clearly be seen in figure 3 of Kita, element 66 is the interface leading to the printer), wherein said receiving and outputting are performed in accordance with reception of the print command (column 4, lines 18-44 of Kita).

- in the second copying mode for performing second copying operation based on a first processed image data (column 6, lines 56-67 of Kita):

- o reading an image of a document (column 5, lines 16-30 of Kita) and outputting an image signal by the scanner (column 5, lines 31-47 of Kita).

- o performing image processing on the image signal output by the scanner to provide a first processed image signal (column 6, lines 58-61 of Kita), the image processing being processing that is necessary for copying (column 6, lines 62-65 of Kita).

- o outputting the first processed image signal to the printing unit via said second bidirectional general-purpose interface (figure 3 and column 6, lines 56-67 of Kita).

Kita does not disclose expressly that said first and second bidirectional general-purpose interfaces are of the same standard; and that said first copying operation is completed without requiring any additional key operation of the external computer conducted by the user other than the copy key operation.

Kawamata discloses a print system wherein all of the interfaces are standardized (column 1, line 67 to column 2, line 4 of Kawamata).

Kita and Kawamata are combinable because they are from the same field of endeavor, namely digital image data printing and reproduction systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified Kita wherein the first and second bidirectional general-purpose interfaces are of the same standard, according to the teachings of Kawamata. The suggestion for doing so would have been that the overall processing speed would increase using standard interfaces since each device would operate at the fastest speed available and the input and output would be better synchronized. Therefore, it would have been obvious to combine Kawamata with Kita.

Kita in view of Kawamata does not disclose expressly that said first copying operation is completed without requiring any additional key operation of the external computer conducted by the user other than the copy key operation.

Matsumoto discloses printing, scanning, and other forms of image processing using a single command and without requiring any additional designation by the user other than the particular image processing designation (figure 3 and column 3, lines 49-59 of Matsumoto).

Kita in view of Kawamata is combinable with Matsumoto because they are from the same field of endeavor, namely the scanning, control and processing of digital image data in a digital image data processing, transmitting and copying environment. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to require only a single command to perform an image processing operation, as taught by Matsumoto, wherein said image processing operation is specifically the first copying operation taught by Kita. The motivation for doing so would have been to simplify the overall image data processing. Therefore, it would have been obvious to combine Matsumoto with Kita in view of Kawamata to obtain the invention as specified in claim 27.

Regarding claim 59: Kita discloses that said control unit has a density adjusting function (column 4, lines 8-12 of Kita).

5.   **Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kita (US Patent 5,021,892) in view of Kawamata (US Patent 4,989,163), Matsumoto (US Patent 5,684,607), and Kenmochi (US Patent 5,900,947).**

Regarding claim 58: Kita in view of Kawamata and Matsumoto does not disclose expressly that said scanner generates a color image signal.

Kenmochi discloses a scanner that generates a color image signal (column 11, lines 63-67 of Kenmochi).

Kita in view of Kawamata and Matsumoto are combinable with Kenmochi because they are from the same field of endeavor, namely the control and operation of digital image data reproduction devices and the processing of the digital image signal obtained thereon. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a scanner that generates color image signals, as taught by Kenmochi. The motivation for doing so would have been to be able to obtain full color image data from a scanned document, which is readily recognized by those of ordinary skill in the art to be a desirable capability. Therefore, it would have been obvious to combine Kenmochi with Kita in view of Kawamata and Matsumoto to obtain the invention as specified in claim 58.

6.   **Claims 64, 66-67, 71-73 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kita (US Patent 5,021,892) in view of Matsumoto (US Patent 5,684,607).**

Regarding claim 64: <u>Kita discloses</u> a printing apparatus (figure 3(1) of Kita) comprising:

- a scanner (figure 3(60) of Kita) for reading an image of a document (column 5, lines 16-30 of Kita) and outputting an image signal (column 5, lines 31-47 of Kita).

- a control unit (figure 3(50,51,52,54,56,DB,AB,CB) of Kita – main CPU) adapted for controlling said printing apparatus (column 4, lines 46-54 of Kita) and performing image processing on the image signal output from said scanner to provide a first processed image signal, the image processing being processing that is necessary for copying (column 5, lines 33-42 of Kita).

- a first interface (figure 3(5) and column 6, lines 20-28 of Kita) adapted for transmitting the image signal output by said scanner to an external computer (figure 3(8) and column 5, lines 65-67 of Kita), which performs image processing on the transmitted image signal to provide a second processed image signal (column 3, lines 46-48 of Kita), and for receiving the second processed image signal from the external computer (column 5, lines 65-68 of Kita – signal must be received from computer to be recorded by printer), the image processing performed by the external

computer being processing that is necessary for copying (column 5, lines 65-68 of Kita – would be unable to print if processing necessary for copying was not performed).

- a second interface (figure 3(66) of Kita) adapted for outputting the first processed image signal (column 4, lines 3-17 of Kita) and the second processed image signal (column 5, lines 67-68 of Kita) to a printing unit (as can clearly be seen in figure 3 of Kita, element 66 is the interface leading to the printing unit).

- said printing unit has a first copying mode (column 6, lines 50-55 of Kita), and a second copying mode (column 6, lines 56-67 of Kita).

- in the first copying mode for performing first copy operation based on the second processed image signal in accordance with a read command and a print command transmitted from the external computer in response to a copy key operation of the external computer conducted by the user (figure 2; column 4, lines 18-44 and lines 63-66; column 6, lines 50-55; and column 19, lines 63-67 of Kita), the image signal is transmitted to the external computer where the image signal is processed into the second processed image signal via said control unit and said first interface in accordance with reception of the read command (column 19, line 68 to column 20, line 11 of Kita), then the second processed image signal is transmitted to the printing unit via said first interface, said control unit, and said second interface in accordance with reception of the print command (column 20, lines 12-22 of Kita).

- in the second copying mode for performing second copying operation based on the first processed image signal (column 6, lines 56-67 of Kita), the image signal is transmitted to said control unit where the image signal is processed into the first processed image signal (column 6, lines 58-61 of Kita) and the first processed image signal is transmitted to the printing unit via said second interface (figure 3 and column 6, lines 56-67 of Kita).

Kita does not disclose expressly that said first copy operation is completed without requiring any additional key operation of the external computer conducted by the user other than the copy key operation.

Matsumoto discloses printing, scanning, and other forms of image processing using a single command and without requiring any additional designation by the user other than the particular image processing designation (figure 3 and column 3, lines 49-59 of Matsumoto).

Kita is combinable with Matsumoto because they are from the same field of endeavor, namely the scanning, control and processing of digital image data in a digital image data processing, transmitting and copying environment. At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to require only a single command to perform an image processing operation, as taught by

Matsumoto, wherein said image processing operation is specifically the first copying operation taught by

Kita. The motivation for doing so would have been to simplify the overall image data processing. There-

fore, it would have been obvious to combine Matsumoto with Kita to obtain the invention as specified in

claim 64.

Regarding claim 66: Kita discloses that said printing apparatus has a print mode (column 7,

lines 5-7 of Kita), in which print data is transmitted from the external computer to said control unit via

said first interface (column 11, lines 36-40 of Kita) and the printing unit prints the print data (column 11,

lines 39-40 of Kita) in response to a print key operation of the external computer conducted by the user

(figure 3 and column 4, lines 45-66 of Kita), and an image reading mode (column 6, line 68 to column 7,

line 4 of Kita) in which an image signal from the scanner is transmitted from said control unit to the

external computer via said first interface (column 6, line 68 to column 7, line 5 of Kita) in response to a

read key operation of the external computer conducted by the user (figure 3 and column 4, lines 45-66 of

Kita).

Regarding claim 67: <u>Kita discloses</u> a method comprising the steps of:

- in a first copying mode (column 6, lines 50-55 of Kita) for performing first copying operation
  based on a second processed image signal in accordance with a read command and a print
  command transmitted from the external computer in response to a copy key operation of the
  external computer (figure 2; column 4, lines 18-44 and lines 63-66; column 6, lines 50-55; and
  column 19, lines 63-67 of Kita) connected to the printing apparatus with a first interface (figure 3
  and column 4, lines 45-66 of Kita) conducted by the user (figure 2; column 4, lines 18-44 and
  lines 63-66 of Kita):
    - reading an image of a document (column 5, lines 16-30 of Kita) and outputting an image
      signal by a scanner (figure 3(60) and column 5, lines 31-47 of Kita).
    - transmitting the image signal output by the scanner to the external computer (figure 3(8)
      and column 5, lines 65-67 of Kita) via the first interface (figure 3(5) of Kita – as can
      clearly be seen in figure 3 of Kita, element 5 is the interface for receiving data from the
      external computer), wherein the external computer performs image processing on the
      transmitted image signal to provide a second processed image signal (column 3, lines 46-
      48 of Kita), the image processing being processing that is necessary for copying (column
      5, lines 65-68 of Kita – would be unable to print if processing necessary for copying was

not performed), wherein said reading and said transmitting are performed in accordance with reception of the read command (column 4, lines 18-30 of Kita).

   o   receiving the second processed image signal from the external computer (column 5, lines 65-68 of Kita – signal must be received from computer to be recorded by printer) via the first interface (figure 3(5) of Kita – as can clearly be seen in figure 3 of Kita, element 5 is the interface for receiving data from the external computer).

   o   outputting the second processed image signal to a printing unit (figure 3(3) and column 5, lines 67-68 of Kita) via a second interface (figure 3(66) of Kita - as can clearly be seen in figure 3 of Kita, element 66 is the interface leading to the printer), wherein said receiving and outputting are performed in accordance with reception of the print command (column 4, lines 18-44 of Kita).

• in a second copying mode for performing second copying operation based on a first processed image data (column 6, lines 56-67 of Kita):

   o   reading an image of a document (column 5, lines 16-30 of Kita) and outputting an image signal by the scanner (column 5, lines 31-47 of Kita).

   o   performing image processing on the image signal output by the scanner to provide a first processed image signal (column 6, lines 58-61 of Kita), the image processing being processing that is necessary for copying (column 6, lines 62-65 of Kita).

   o   outputting the first processed image signal to the printing unit via the second interface (figure 3 and column 6, lines 56-67 of Kita).

Kita does not disclose expressly that the first copying operation is completed without requiring any additional key operation of the external computer conducted by the user other than the copy key operation.

Matsumoto discloses printing, scanning, and other forms of image processing using a single command and without requiring any additional designation by the user other than the particular image processing designation (figure 3 and column 3, lines 49-59 of Matsumoto).

Kita is combinable with Matsumoto because they are from the same field of endeavor, namely the scanning, control and processing of digital image data in a digital image data processing, transmitting and copying environment. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to require only a single command to perform an image processing operation, as taught by Matsumoto, wherein said image processing operation is specifically the copying operation taught by Kita. The motivation for doing so would have been to simplify the overall image data processing. Therefore, it

would have been obvious to combine Matsumoto with Kita to obtain the invention as specified in claim 67.

Regarding claim 71: <u>Kita discloses</u>:

- in the read mode, the image signal from said scanner is transmitted to the external computer (column 6, line 68 to column 7, line 5 of Kita) in accordance with reception of a read command (column 10, line 66 to column 11, line 5 of Kita) transmitted from the external computer in response to the read key operation (figure 3 and column 4, lines 45-66 of Kita).

- in the print mode, the image signal from the external computer is transmitted to the printing unit (column 11, lines 36-40 of Kita) in accordance with reception of a print command (column 11, lines 20-22 and lines 36-40 of Kita) transmitted from the external computer in response to the print key operation (figure 3 and column 4, lines 45-66 of Kita).

- in the first copy mode, the image signal from the scanner is transmitted to the external computer (column 19, line 68 to column 20, line 11 of Kita) in accordance with reception of the read command (column 6, lines 50-55 of Kita and column 19, lines 63-67 of Kita) transmitted from the external computer in response to the copy key operation (figure 3 and column 4, lines 45-66 of Kita), and thereafter the second processed image signal is transmitted to the printing unit in accordance with reception of the print command transmitted from the external computer in response to the copy key operation (column 20, lines 12-22 of Kita).

Regarding claim 72: <u>Kita discloses</u> a printing apparatus (figure 3(1) of Kita) and an information processing apparatus (figure 3(8) of Kita), wherein the <u>information processing apparatus includes</u>:

- a copying designation unit (figure 3(8(KYBD)) of Kita), adapted to designate a start for copying (column 3, lines 44-57 of Kita).

- a processing unit (figure 3(8(CPU)) of Kita), adapted to process an image signal to provide a second processed image signal (column 3, lines 44-52 of Kita).

wherein the <u>printing apparatus includes</u>:

- a scanner (figure 3(60) of Kita) for reading an image of a document (column 5, lines 16-30 of Kita) and outputting an image signal (column 5, lines 31-47 of Kita).

- a control unit (figure 3(50,51,52,54,56,DB,AB,CB) of Kita – main CPU) adapted for controlling said printing apparatus (column 4, lines 46-54 of Kita) and performing image processing on the image signal output from said scanner, to provide a first processed image signal, the image processing being processing that is necessary for copying (column 5, lines 33-42 of Kita).

- a first interface (figure 3(5) and column 6, lines 20-28 of Kita) for transmitting, under control of said control unit, the image signal output by said scanner to said information processing apparatus (figure 3(8) and column 5, lines 65-67 of Kita), which performs image processing on the transmitted image signal to provide a second processed image signal (column 3, lines 46-48 of Kita), and for receiving the second processed image signal from the information processing apparatus (column 5, lines 65-68 of Kita – signal must be received from computer to be recorded by printer), the image processing being processing that is necessary for copying (column 5, lines 65-68 of Kita – would be unable to print if processing necessary for copying was not performed).

- a second interface (figure 3(66) of Kita) adapted for outputting the first processed image signal (column 4, lines 3-17 of Kita) and the second processed image signal (column 5, lines 67-68 of Kita) to a printing unit (as can clearly be seen in figure 3 of Kita, element 66 is the interface leading to the printing unit).

- a copy key (figure 2(41) of Kita) for designating a start of copying (column 4, lines 31-35 of Kita).

- said printing apparatus has a plurality of modes including a first copying mode (column 6, lines 50-55 of Kita) performed in response to a copying designation (column 6, lines 50-55 of Kita and column 19, lines 63-67 of Kita) by said information processing apparatus (figure 3 and column 4, lines 45-66 of Kita), and a second copying mode (column 6, lines 56-67 of Kita) performed in response to a copying designation by said copy key (column 4, lines 31-35 of Kita).

- in the first copying mode for performing a first copying operation based on the second processed image signal in accordance with a read command and a print command transmitted from the external computer (column 4, lines 18-44 of Kita) in response to a copying designation by the user (column 6, lines 50-55 of Kita and column 19, lines 63-67 of Kita), the image signal from said scanner is transmitted to said information processing apparatus, where the image signal is processed into the second processed image signal, via said control unit and said first interface in accordance with reception of the read command (column 19, line 68 to column 20, line 11 of Kita), and thereafter the second processed image signal is transmitted to the printing unit via said first interface, said control unit, and said second interface in accordance with reception of the print command (column 20, lines 12-22 of Kita).

- in the second copying mode for performing a second copying operation based on the first processed image signal (column 6, lines 56-67 of Kita), the image signal from said scanner is transmitted to said control unit where the image signal is processed to the first image signal

(column 6, lines 58-61 of Kita) and the first image signal is transmitted to the printing unit via
said second interface (figure 3 and column 6, lines 56-67 of Kita).

Kita does not disclose expressly that said first copying mode is completed without requiring any
additional key operation by the user other than the copy key operation.

<u>Matsumoto discloses</u> printing, scanning, and other forms of image processing using a single
command and without requiring any additional designation by the user other than the particular image
processing designation (figure 3 and column 3, lines 49-59 of Matsumoto).

Kita and Matsumoto are combinable because they are from the same field of endeavor, namely
the scanning, control and processing of digital image data in a digital image data processing, transmitting
and copying environment. At the time of the invention, it would have been obvious to a person of
ordinary skill in the art to require only a single command to perform an image processing operation, as
taught by Matsumoto, wherein said image processing operation is specifically the first copying operation
taught by Kita. The motivation for doing so would have been to simplify the overall image data
processing. Therefore, it would have been obvious to combine Matsumoto with Kita to obtain the
invention as specified in claim 72.

Regarding claim 73: Kita discloses that said information processing apparatus further
comprises:

- a read designation unit (figure 3(8(portion)) of Kita), adapted to designate a start for a reading of
  a document (column 3, lines 44-48 and column 7, lines 1-4 of Kita).

- a print designation unit (figure 3(8(portion)) of Kita), adapted to designate a start for printing data
  that said information processing apparatus transmits (column 3, lines 44-48 and column 7, lines
  5-7 of Kita).

- said printing apparatus has a print mode (column 11, lines 20-22 and lines 36-40 of Kita), in
  which print data is transmitted from the information processing apparatus to said control unit via
  said first interface (figure 3 and column 4, lines 45-66 of Kita) and the printing unit prints the
  print data in response to a print designation designated by the print designation unit (column 11,
  lines 20-22 and lines 36-40 of Kita), and the image reading mode in which an image signal from
  the scanner is transmitted from said control unit from said information processing apparatus via
  said first interface in response to a read designation designated by the read designation unit
  (column 11, lines 36-40 of Kita).

→ The information processing apparatus (figure 3(8) of Kita) contains a CPU, along with RAM and ROM which stores computer program routines. The read designation unit and print designation unit correspond to particular computer program routines stored in said ROM.

Regarding claim 75: <u>Kita discloses:</u>

• in the read mode, the image signal from said scanner is transmitted to the information processing apparatus (figure 3 and column 4, lines 45-66 of Kita) in accordance with a read command transmitted from the information processing apparatus (column 6, line 68 to column 7, line 5 of Kita) to the printing apparatus in response to a read designation (column 10, line 66 to column 11, line 5 of Kita).

• in the print mode, the image signal transmitted from the information processing apparatus (figure 3 and column 4, lines 45-66 of Kita) to the printing apparatus is transmitted to the printing unit (column 11, lines 36-40 of Kita) in accordance with reception of a print command transmitted from the information processing apparatus to the printing apparatus in response to the print designation (column 11, lines 20-22 and lines 36-40 of Kita).

• in the first copy mode, the image signal from said scanner is transmitted to the information processing apparatus (column 19, line 68 to column 20, line 11 of Kita) in accordance with reception of the read command transmitted from the information processing apparatus (figure 3 and column 4, lines 45-66 of Kita) in response to the copying designation (column 6, lines 50-55 of Kita and column 19, lines 63-67 of Kita), and thereafter the second processed image signal is transmitted to the printer in accordance with reception of the print command transmitted from the information processing apparatus to the printing apparatus in response to the copying designation (column 20, lines 12-22 of Kita).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
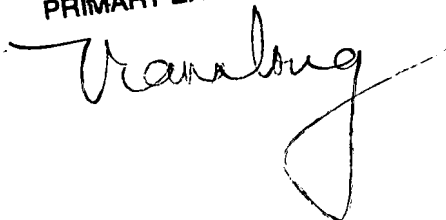
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20 June 2007

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